

WHAT IS CLAIMED IS:

1. A method for operating an Internet telephony gateway comprising the steps of:  
5       accessing a call between a terminal unit for a PSTN and a terminal unit for an IP network;  
respectively monitoring states of the PSTN and the IP network through a monitoring board for the PSTN and a monitoring board for the IP network;  
10      generating an alarm when any failure occurs in either the PSTN or the IP network; and  
performing a flow for normally terminating the call between the terminal unit for the PSTN and the terminal unit for the IP network.  
15      2. The method of claim 1, wherein the flow includes the step of providing a sound for informing any one, which is normally operating, between the terminal unit for the PSTN and the terminal unit for the IP network, of termination of the call.  
20      3. The method of claim 2, wherein the sound includes a termination message, a tone, and an announcement.  
25      4. The method of claim 1, wherein the board is a print circuit board.  
30      5. A method for operating an Internet telephony gateway comprising the steps of:  
accessing a call between a terminal unit for a PSTN and a terminal unit for an IP network;

respectively monitoring states of the PSTN and the IP network through a board for the PSTN and a board for the IP network;

5 generating an alarm in the board for the PSTN when any failure occurs in the PSTN;

blocking a channel between the Internet telephony gateway and the PSTN; and

performing a flow for terminating the call with the terminal unit for the IP network.

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6. The method of claim 5, wherein the flow includes the step of providing a sound for informing the terminal unit for the IP network of termination of the call.

15 7. The method of claim 6, wherein the sound includes a termination message, a tone, and an announcement.

8. A method for operating an Internet telephony gateway comprising the steps of:

20 accessing a call between a terminal unit for a PSTN and a terminal unit for an IP network;

respectively monitoring states of the PSTN and the IP network through a board for the PSTN and a board for the IP network;

25 generating an alarm in the board for the IP network when any failure occurs in the IP network;

blocking a channel between the Internet telephony gateway and the IP network; and

30 performing a flow for terminating the call with the terminal unit for the PSTN.

9. The method of claim 8, wherein the flow includes the step of providing a sound for informing the terminal unit for the PSTN of termination of the call.

5        10. The method of claim 9, wherein the sound includes a termination message, a tone, and an announcement.

11. An Internet telephony gateway comprising:

10      a PSTN interface module interfacing with a PSTN and generating an failure alarm when any failure occurs in the PSTN;

15      an IP network interface module interfacing with an IP network and generating a failure alarm when any failure occurs in the IP network;

20      a data processing module performing a data processing procedure required for data exchange between the PSTN and the IP network; and

25      a control module performing a flow that enables a corresponding subscriber to normally terminate a call through one network in which a failure alarm has not occurred, in response to the failure alarm that may occur in either the PSTN or the IP network.

12. The Internet telephony gateway of claim 11, wherein the control module includes:

25      a maintenance module managing the state of a block, which matches the PSTN with the IP network, and managing the inner state of the Internet telephony gateway; and

30      a call processing module matching the PSTN with the IP network, managing the states of channels for the call processing, and updating the states of the channels according to maintenance information provided by the maintenance module.

13. The Internet telephony gateway of claim 12, wherein the  
maintenance module controls ejection and injection of a PBA for  
a block related to matching of the PSTN, normal data, abnormal  
data, and the connection state of physical LANs, while the call  
5 processing module manages the states of the channels, the idle  
state, the conversation busy state, the block state, and the not-  
assign state.

14. The Internet telephony gateway of claim 11, wherein the  
10 PSTN interface module and the IP network interface module  
include:

a PBA providing alarm data of the PSTN and the IP network;  
a first parallel-to-serial converter converting alarm data  
of a HDD module to serial data;  
15 a second parallel-to-serial converter converting parallel  
input state data of a fan and cables to serial data;  
a serial-to-parallel converter converting the data from the  
first and second parallel-to-serial converters to parallel data,  
and adding the parallel data to state data of ejection,  
20 injection, and operation of boards, input in parallel from the  
PBA;  
a memory storing the data output from the serial-to-parallel  
converter in corresponding addresses; and  
a data bus buffer transmitting the state data stored in the  
25 memory to the system module so as to monitor the failure.

15. The Internet telephony gateway of claim 14, wherein the  
failure alarm data are collected in PSB and injection bit types  
from the PBA.